

Remarks

Claims 1-4, 6-8 and 11-16 are pending herein.

In the Office Action, claims 1-4, 6 and 11-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 3,957,672 to Zisman et al. ("Zisman"); and claims 1-4, 6-8 and 11-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Zisman in view of U.S. Patent 5,514,301 to Bil et al. ("Bil").

In view of the remarks herein, Applicant respectfully requests reconsideration and withdrawal of the rejections set forth in the Office Action.

I. Rejection of Claims 1-4, 6 and 11-15

Claims 1-4, 6 and 11-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Zisman. Zisman is cited for disclosing a surface-active composition for displacing aqueous or organic liquid films from solid surfaces. The surface-active composition contains a fluorinated polyether which is said to provide surface activity to the composition (col. 4, lines 56-65).

Applicant respectfully submits that, for at least the reasons given below, Zisman would not have rendered instant claims 1-4, 6 and 11-15 obvious.

Instant claims 1-4, 6 and 11-15 are directed to water-removing dewetting compositions consisting essentially of between 0.01 and 0.5% by weight of at least one surface-active agent in a mixture of at least one fluorinated solvent and from 2% to 30% by weight of at least one water-immiscible polyfluorinated alcohol. The fluorinated solvent is a saturated or unsaturated fluorinated hydrocarbon containing from 3 to 6 carbon atoms.

As noted above, Zisman is cited for teaching a surface active composition containing a fluorinated polyether which provides surface activity to the composition. Thus, in Zisman, the surface active agent is the particular fluorinated ether taught therein, i.e., α (perfluoropropyl) ω -(1,1,1,2poly[oxy(perfluoro-1,2-propylene)]. Zisman further teaches that the fluorinated ether can function as a solute, a solvent or a co-solvent. At col. 4, lines 63-65, Zisman teaches that the fluorinated ether can be used as a solvent for a fluoroalcohol. The Office Action states that “[t]his embodiment differs from the instantly claimed invention in that no surface-active agent is provided” (page 4, section 3, third paragraph, of the Office Action). However, Applicant submits that this embodiment differs from Applicant’s claimed composition in at least two respects. First, the fluorinated solvent in Applicant’s claimed composition and the fluorinated polyether used as the solvent in the fluoroalcohol-containing composition in Zisman are different compounds. In Applicant’s claimed composition, the fluorinated solvent is a saturated or unsaturated fluorinated hydrocarbon containing from 3 to 6 carbon atoms. In Zisman, the fluorinated polyether as represented by the formula shown at col. 2, lines 17-19 has at least 8 carbon atoms. Second, Applicant’s claimed composition contains a surface active agent separate and distinct from the solvent. Zisman teaches at col. 1, lines 50-52 that the composition containing the specific fluorinated polyether is a “surface-active composition”. In other words, in the Zisman embodiment at issue, the fluorinated polyether is both a solvent and a surface-active agent. Therefore, Zisman does not teach the use of a surface-active agent separate and distinct from the fluorinated polyether solvent. Therefore, for at least these

reasons, Zisman's fluoroalcohol-containing composition and Applicant's claimed composition are different.

According to the Office Action, the Zisman "composition may additionally contain fluoroalcohols (fluorinated alcohols) **and** perfluoroalkane solvents (fluorinated solvents)...." [emphasis added]. However, Zisman does not teach or suggest any embodiment wherein the composition contains both a fluoroalcohol and a perfluoroalkane solvent. Rather, as noted above, when the composition contains a fluoroalcohol, the fluoroalcohol is used as a solute and the fluorinated polyether is present as the solvent. In the fluoroalcohol-containing embodiment, the Zisman composition does not contain a perfluoroalkane. When the Zisman composition contains a perfluoroalkane, the perfluoroalkane is present as the solvent and the fluorinated polyether is present as the solute. In the perfluoroalkane-containing embodiment, the Zisman composition does not contain a fluoroalcohol. Thus, Zisman does not teach or suggest a composition containing a fluoroalcohol and a perfluoroalkane. In particular, Zisman does not teach or suggest a composition containing a fluoroalcohol solute and a perfluoroalkane solvent.

According to the Office Action, Zisman teaches that the fluoroalcohol may be present in an amount of up to 1% and that the perfluoroalkane solvent may be present in an amount of up to 99% by volume. However, as Applicant points out above, Zisman does not teach an embodiment wherein the composition contains both a fluoroalcohol and a perfluoroalkane. Thus, while Zisman may teach that in the fluoroalcohol-containing embodiment, the fluoroalcohol may be present in an amount of up to 1%, and that in the perfluoroalkane-containing embodiment, the perfluoroalkane may be present in an amount

of up to 99% by volume, Zisman does not teach an embodiment wherein a single composition contain up to 1% of a fluoroalcohol and up to 99% by volume of a perfluoroalkane solvent.

The Office Action states that with respect to the amounts of the components, Zisman teaches ranges for the surface active agent and the fluorinated solvent that overlap or lie within those claimed by Applicant. However, the surface active agent in Zisman is the particular fluorinated polyether disclosed therein. As noted hereinabove, Zisman teaches that in the fluoroalcohol-containing embodiment therein, the fluoroalcohol is the solute and the fluorinated polyether is the solvent. Thus, in Zisman's fluoroalcohol-containing embodiment, the fluorinated polyether functions both as the solvent and as the surface active agent. In other words, as Applicant noted above, Zisman does not teach a surface active agent separate and distinct from the fluorinated polyether, i.e., the solvent in the fluoroalcohol-containing composition. Because the surface active agent and the fluorinated solvent are the same in the fluoroalcohol-containing embodiment, Zisman does not teach a fluoroalcohol-containing composition wherein the concentration ranges for the surface active agent and the fluorinated solvent overlap or lie within those claimed by Applicant.

Zisman further teaches that the aforementioned embodiment wherein the fluorinated polyether is the solvent and a fluoroalcohol is the solute and another embodiment wherein the fluorinated polyether is the solute and a fluoroalkane is the solvent are useful "[w]hen the primary objective is displacement of liquid organic film from solid surfaces for short periods of time, e.g., ranging from a few minutes to about 24

hours” (col. 4, lines 56-59). However, Zisman does not teach whether either or both of these embodiments are useful when the objective is displacement of water from solid surfaces. Zisman’s statements relative to the displacement of water are very broad. For example, in the Summary of the Invention, Zisman teaches that “[i]n accordance with the novel aspects of the invention liquid films, i.e., organic liquids or water, are displaced from solid surfaces by the application thereto of a new surface-active composition containing α (perfluoropropyl) ω -(1,1,1,2poly[oxy(perfluoro-1,2-propylene)]” (col. 1, lines 48-52). However, in the description of the invention, Zisman does not teach anything relative to the removal of water. In particular, Zisman does not teach whether the embodiment wherein the fluorinated polyether is the solvent and the fluoroalcohol is the solute would be useful in displacing water from solid surfaces. Zisman only teaches that this embodiment is useful “[w]hen the primary objective is displacement of liquid organic film from solid surfaces for short periods of time, e.g., ranging from a few minutes to about 24 hours”. Applicant’s claimed composition is a dewetting composition. Applicant respectfully submits that one skilled in the art would not have been motivated by Zisman to use a composition containing a fluorinated polyether solvent and a fluoroalcohol solute to displace water from a solid surface.

On December 2, 2003, Applicant submitted a Declaration Under 37 CFR 1.132 (“the ‘132 Declaration”), which set forth two experiments that compared the ability of a specific amount of a polyfluorinated alcohol to remove water from a solid surface with the ability of the same amount of the same polyfluorinated alcohol to remove an organic liquid from the solid surface. The polyfluorinated alcohol’s water-removing ability was

significantly greater than its ability to remove the organic liquid. Thus, the experiments showed that the ability of a specific amount of a specific polyfluorinated alcohol to remove water from a solid surface did not mean that the same amount of the same polyfluorinated alcohol could remove oil from the same type of solid surface.

According to the Office, the '132 Declaration "is insufficient because it fails to compare the instant invention to that of the closest prior art (Zisman et al.). In fact, the declaration makes no comparison to any prior art at all. To be sufficient, Applicant must show that the instant invention (using 2% fluoroalcohol) provides unexpected results over Zisman, which teaches 1% fluoroalcohol." Whether the '132 Declaration is sufficient or insufficient to show unexpected results based on the amount of fluoroalcohol used, Applicant respectfully submits that the Declaration is sufficient to show that a material which is able to remove water from a solid surface is not necessarily able to remove an organic liquid from a solid surface and vice-versa. In other words, the '132 Declaration shows that Zisman's disclosure that a composition containing a fluorinated polyether solvent and a fluoroalcohol solute effectively removes an organic liquid from a solid surface should not be treated as a disclosure that the same composition can effectively remove water from a solid surface. Thus, the '132 Declaration is meant to support Applicant's argument that Zisman does not teach that a composition containing a fluorinated polyether solvent and a fluoroalcohol solute effectively removes water from a solid surface.

Therefore, for at least the foregoing reasons, Applicant respectfully submits that Zisman would not have rendered instant claims 1-4, 6 and 11-15 obvious.

II. Rejection of Claims 1-4, 6-8 and 11-16

Claims 1-4, 6-8 and 11-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Zisman in view of Bil.

In this rejection, the Office Action refers to the embodiment of Zisman wherein the fluorinated polyether is used as the solvent and a fluoroalcohol is used as the solute. It should be noted that this embodiment of Zisman is directed to the displacement of organic liquids from solid surfaces for short periods of time. The Office Action states that this embodiment of Zisman differs from the instantly claimed invention in that no surface active agent is provided. Bil is cited for teaching compositions for dewetting solid surfaces, wherein a surface active material is present. According to the Office Action, it would have been obvious to use Bil's surface active agent in the dewetting composition of Zisman.

Zisman describes the foregoing embodiment as a "liquid surface-active composition" (col. 4, line 59). Applicant respectfully submits that if this embodiment is itself a surface-active composition, an additional surface active agent would not be required. In other words, Zisman itself provides no motivation to add a separate surface active agent to the composition therein because the composition itself is a surface-active composition. Bil does not teach or suggest adding a surface active agent to a composition which is itself a surface active composition. Therefore, neither Zisman nor Bil provides any motivation to add a separate and distinct surface active agent to the Zisman surface active composition. Furthermore, as Applicant pointed out above, this embodiment of

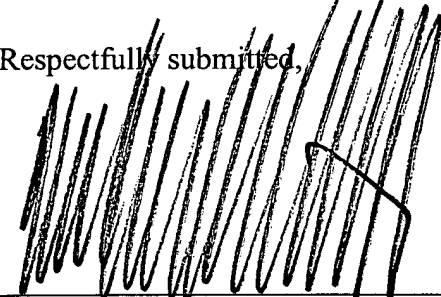
Zisman is taught in connection with the removal of organic liquid from solid surfaces, not the removal of water. In other words, this embodiment of Zisman is not a dewetting composition. Bil, which is directed solely to a dewetting composition, does not teach anything relative to the removal of organic liquid from solid surfaces and, therefore, would not motivate one skilled in the art to modify a composition designed to remove organic liquid from a solid surface.

Thus, for at least these reasons, Applicant submits that claims 1-4, 6-8 and 11-16 would not have been obvious over Zisman in view of Bil.

III. Conclusion

In view of the foregoing remarks, Applicant respectfully requests that the rejections of the claims be withdrawn and that claims 1-4, 6-8 and 11-16 be allowed.

Respectfully submitted,



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